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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,503	09/21/2001	Anuj Aggarwal	24320	5346

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EXAMINER	
CHOI, PETER Y	
ART UNIT	**PAPER NUMBER**
1771	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/831,503	AGGARWAL ET AL.	
	Examiner	Art Unit	
	Peter Y. Choi	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,4,6-21* is/are pending in the application.

4a) Of the above claim(s) *12-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,6-11 and 19-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 May 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

NON-FINAL ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1, 3, 4, 6-11, and 19-21 in the reply filed on March 30, 2007, and the telephone response by Mr. Stanley Protigal on March 22, 2007, is acknowledged.

Specification

2. The disclosure is objected to because of the following informalities: page 4 line 3 refers to "especially of 900Nms^{-3}." It appears that Applicants intended to recite "900Nsm^{-3}." Page 6 line 7 refers to a "volume of 20 kg/m^2 to 60 kg/m^2." Volume is not measured in kg/m^2. It appears that Applicants intended to recite "basis weight of 20 kg/m^2 to 60 kg/m^2." Page 7 line 26 refers to a "weight per unit area of 20 g/m^3." Area is not measured in m^3. It appears that Applicants intended to recite a "weight per unit area of 20 g/m^2."

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 3, 4, 6-11, and 19-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 14 of claim 1 is unclear as to what Applicants intend when claiming "the passenger compartment side" since both "a passenger compartment side of

said support layer" and "a passenger compartment side of said second reinforcement layer" are both recited in the claim.

Additionally, it is unclear if the Applicants are claiming the totality of the layers on the passenger compartment side which are not literally the vehicle roof. Or are the Applicants claiming the lining layers comprising the layers on the passenger compartment side of the support layer? Or are the Applicants claiming the lining layers comprising the layers on the passenger compartment side of the second reinforcement layer?

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 3, 4, 8, 9, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,582,906 to Romesberg in view of USPN 5,841,081 to Thompson.

Regarding claims 1, 3, 4, 8, 9, 19, and 21, Romesberg teaches a lining for a vehicle roof with an air-permeable support layer, an air-permeable first reinforcement layer on a vehicle roof side of said support layer, and an air-permeable second reinforcement layer on a passenger compartment side of said support layer, an air-impermeable back layer on a vehicle roof side of said first reinforcement layer, an air permeable decorative layer on a passenger compartment side of said second reinforcement layer, and the back, first reinforcement, support, second reinforcement, and decorative layers being bonded to each other with an air-permeable adhesive,

and further comprising a semi-permeable, microporous and migration-resistant acoustic barrier layer provided between the second reinforcement layer and the decorative layer to make an acoustically optimisable and aesthetically-resistant vehicle rooflining, wherein the barrier layer comprises a mixed fibre fabrc (see entire document including column 3 lines 27-40, column 4 line 15 to column 5 column 5 line 63, column 7 lines 16-62).

Regarding claims 1, 3, 4, 8, 9, 19 and 21, Romesberg does not appear to teach that the barrier layer weighs approximately 20 g/m^2 to $60g/m^2$. Since Romesberg is silent with regards to the specification of the barrier layer, it would have been necessary and thus obvious to look to the prior art for conventional specifications. Thompson provides this conventional teaching showing that it is known in the acoustical insulation art to form a nonwoven web comprising organic and polyester fibers with a basis weight of about 50 to 4,000 grams per square meter based on the desired sound absorption properties (Thompson, column 1 line 53 to column 2 line 24, column 5 lines 1-35, column 6 lines 10-63, column 11 lines 15-22). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the headliner barrier layer of Romesberg with the specifications as taught by Thompson, motivated by the expectation of successfully practicing the invention of Romesberg.

Regarding claims 1, 3, 4, 8, 9, 19 and 21, Romesberg in view of Thompson does not appear to teach that the layers on the passenger compartment side have the claimed air flow resistance. Although the prior art does not disclose the claimed air flow resistance, the claimed property is deemed to be inherent to the structure in the prior art since the Romesberg and Thompson references teach an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same.

The burden is on the Applicants to prove otherwise. *In re Fitzgerald,* 205 USPQ 594 (CCPA 1980). Additionally, the claimed air flow resistance would obviously have been present once the Romesberg in view of Thompson product is provided. Note *In re Best,* 195 USPQ at 133, footnote 4 (CCPA 1977).

Regarding claim 3, the air-permeable support layer is made from a polyurethane foam (column 7 lines 1-15).

Regarding claim 4, the first reinforcement layer comprises a glass fibre layer and the second reinforcement layer comprises a glass fibre layer (column 4 line 63 to column 5 line 27).

Regarding claim 8, the barrier layer is migration-resistant to softeners, decomposition products used by ageing and/or additives from a polyurethane foam layer or adhesive films (column 4 lines 20-25).

Regarding claim 9, barrier layer has a thickness of 0.2 mm to 1.0 mm (column 7 line 50-62). It should be noted that the barrier layer of Romesberg may comprise DAF 899, which USPN 4,975,138 to Finlayson states has a thickness of 0.3 mm (Finlayson, column 4 lines 15-35).

Regarding claim 21, Romesberg in view of Thompson does not appear to teach that the barrier layer has a specific thickness of 0.285 mm. However, it should be noted that the thickness is a result effective variable. As the thickness increases, the layer becomes stronger and the air flow is altered. Absent unexpected results, it would have been obvious to one of ordinary skill in the art at the time the invention was made to create the barrier layer with a thickness of 0.285 mm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In the present invention, one would have

been motivated to optimize the thickness to create a suitably flexible and strong layer for use as a headliner.

Response to Arguments

7. Applicants' arguments with respect to claims 1, 3, 4, 8, 9, 19 and 21 have been considered but are moot in view of the new grounds of rejection. Additionally, Applicants' argument that Romesberg teaches a barrier layer as non-porous, contrary to the claimed invention, is not persuasive. While film adhesive 24 may be non-porous, web adhesive 46, positioned between the decorative layer and the second reinforcement glass fiber layer is porous, allowing sound waves to pass through the web (column 5 lines 11-43).

Claim Rejections - 35 USC § 103

8. Claims 1, 4, 6-10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,204,209 to Rozek in view of US Pub. No. 2001/0036788 to Sandoe and further in view of Thompson.

Regarding claims 1, 4, 6-10 and 20, Rozek teaches a lining for a vehicle roof with an air-permeable support layer, an air-permeable first reinforcement layer on a vehicle roof side of said support layer, and an air-permeable second reinforcement layer on a passenger compartment side of said support layer, an air permeable decorative layer on a passenger compartment side of said second reinforcement layer, and the back, first reinforcement, support, second reinforcement, and decorative layers being bonded to each other with an air-permeable adhesive, and further comprising a semi-permeable, microporous and migration-resistant acoustic barrier layer

provided between the second reinforcement layer and the decorative layer to make an acoustically optimisable and aesthetically-resistant vehicle rooflining wherein the barrier layer comprises a mixed fibre fabric (see entire document including column 2 line 48 to column 3 line 51, column 4 lines 7-67, column 5 lines 1-67, column 6 lines 1-11). For clarification, it should be noted that Examiner equates fibrous batt 12 to the claimed support layer, porous reinforcement mats 16 and 18 to the claimed first and second reinforcement layers, porous reinforcement mat 20 to the claimed barrier layer, and decorative fabric cover 22 to the claimed permeable decorative layer.

Regarding claims 1, 4, 6-10 and 20, Rozek does not appear to teach an air-impermeable back layer on a vehicle roof side of the first reinforcement layer. However, Sandoe is directed to a vehicle headliner and laminate (Title). Sandoe teaches that vehicle headliners on the interior of the automobile are decorative panels which separates the passenger compartment from the sheet metal forming the roof of the vehicle (Sandoe, paragraph 0005). Examiner equates the inherently air-impermeable sheet metal roof to the claimed air-impermeable layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to consider the sheet metal roof of Sandoe to be the final layer of Rozek, motivated by the desire to employ the laminate of Rozek in a final product such as a lined roof.

Regarding claims 1, 4, 6-10 and 20, Rozek in view of Sandoe does not appear to teach that the barrier layer weighs approximately 20 g/m^2 to $60g/m^2$. Since Rozek and Sandoe are silent with regards to the specification of the barrier layer, it would have been necessary and thus obvious to look to the prior art for conventional specifications. Thompson provides this conventional teaching showing that it is known in the acoustical insulation art to form a

nonwoven web comprising organic and polyester fibers with a basis weight of about 50 to 4,000 grams per square meter based on the desired sound absorption properties (Thompson, column 1 line 53 to column 2 line 24, column 5 lines 1-35, column 6 lines 10-63, column 11 lines 15-22). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the headliner barrier layer of Rozek in view of Sandoe with the specifications as taught by Thompson, motivated by the expectation of successfully practicing the invention of Rozek in view of Sandoe.

Regarding claims 1, 4, and 6-10, Rozek in view of Sandoe and further in view of Thompson does not appear to teach that the layers on the passenger compartment side have the claimed air flow resistance. Although the prior art does not disclose the claimed air flow resistance, the claimed property is deemed to be inherent to the structure in the prior art since the combination of the references teach an invention with a similar structural and chemical composition as the claimed invention. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise. Additionally, the claimed air flow resistance would obviously have been present once the Rozek in view of Sandoe and further in view of Thompson product is provided.

Regarding claim 4, the first reinforcement layer comprises a glass fibre layer (Rozek, column 4 lines 59-67).

Regarding claim 6, the barrier layer comprises cellulose and polyester fibres bonded together (column 5 lines 26-67).

Regarding claim 7, Rozek in view of Sandoe and Thompson does not appear to teach that the surface of the barrier layer is treated or wetted so that said treated or wetted surface can enter

into adhesion with said adhesive. Absent a showing to the contrary, it is Examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. The burden has been shifted to Applicants to show unobvious difference between the claimed product and the prior art product. The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if Applicant intends to rely on Examples in the specification or in a submitted declaration to show unobviousness, Applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claim 8, Rozek in view of Sandoe and further in view of Thompson does not appear to teach that the barrier layer is migration-resistant to softeners, decomposition products used by ageing and/or additives from a polyurethane foam layer or adhesive films. Although the prior art does not disclose the claimed properties, the claimed properties are deemed to be inherent to the structure in the prior art since the combination of the references teaches an invention with a similar structural and chemical composition as the claimed invention, specifically in respect to the specifications of the barrier layer. Properties are the same when the structure and composition are the same. The burden is on the Applicants to prove otherwise.

Regarding claim 9, Rozek in view of Sandoe does not appear to teach that the barrier layer has a thickness of 0.2 mm to 1.0 mm. Since Rozek and Sandoe are silent with regards to the specification of the barrier layer, it would have been necessary and thus obvious to look to the prior art for conventional specifications. Thompson provides this conventional teaching showing that it is known in the acoustical insulation art to form a nonwoven web comprising organic and polyester fibers with a thickness of greater than about 0.5 cm based on the desired sound absorption properties (Thompson, column 5 lines 1-8). Although the ranges do not necessarily overlap, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. See MPEP 2144.05. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the headliner barrier layer of Rozek in view of Sandoe with the specifications as taught by Thompson, motivated by the expectation of successfully practicing the invention of Rozek in view of Sandoe.

Regarding claim 10, the adhesive is a conventional two-pack polyurethane adhesive. It should be noted that the adhesive in Rozek is an elastomeric composition comprising 100 parts by weight polyol having three or four hydroxyl groups, 85 parts by weight of an isocyanate compound having at least 2 reactive isocyanate groups, and 5 to 20 parts of solvent such as trichlorofluoromethane or methylene chloride (column 5 lines 13-20). USPN 5,874,173 to Wenning teaches that two-pack polyurethane adhesives are essentially characterized by polyisocyanates as hardeners and by predominately oligomeric diols and/or polyols as resin. Therefore, the adhesive of Rozek can be considered to be a two-pack polyurethane adhesive.

Response to Arguments

9. Applicants' arguments with respect to claims 1, 6-8, 10, and 20 have been considered but are moot in view of the new grounds of rejection. Additionally, Applicants' argument that Rozek teaches a barrier layer as not an acoustic barrier, is not persuasive. Inherently, the reinforcement mat comprising polyester and cellulosic fibers analogous to the claimed barrier will be an acoustic barrier as the mat in Rozek and the claimed barrier are both structurally and compositionally similar. Additionally, the mat in Rozek formed according to the specifications taught by Thompson will inherently have the claimed air flow resistance.

Claim Rejections - 35 USC § 103

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Romesberg in view of Thompson, as applied to claims 1, 3, 4, 8, 9, 19 and 21 above, and further in view of USPN 4,581,432 to Blum.

Regarding claim 11, Romesberg in view of Thompson does not appear to teach that the decorative layer is an air-permeable polyethylene non-woven fabric layer. However, Romesberg does teach that the decorative cover sheet can be a porous fabric material (column 6 lines 11-15). Since Romesberg is silent with regards to the type of porous fabric material, it would have been necessary and thus obvious to look to the prior art for conventional materials. Blum teaches molded parts useful for headliners comprising a decorative material which can be a non-woven material comprising polyethylene (Blum, column 16 lines 14-35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the decorative layer of Romesberg from a polyethylene nonwoven fabric, as taught by Blum,

motivated by the expectation of successfully practicing the invention of Romesberg in view of Thompson.

Response to Arguments

11. Applicants' arguments with respect to claim 11 have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Y. Choi whose telephone number is (571) 272-6730. The examiner can normally be reached on Monday - Friday, 08:00 - 15:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Peter Y. Choi
April 24, 2007

ANDREW PIZIALI
PRIMARY EXAMINER